

IN THE CLAIMS

Please ~~am~~end the claims as follows:

1. (Currently Amended) A method for joining end portions of belt-shaped glass sheets, the end ~~p~~ortions each having longitudinal side surfaces and a terminal end surface, comprising:

thermally softening the end portions of the belt-shaped glass sheets after locating the end portions so ~~that~~ the end portions overlap each other with longitudinal side surfaces of the end portions overlaid on abutting one another in the thickness direction of each glass sheet;  
and

pressing lap portions of the thermally softened end portions at least once from both sides towards the overlaid abutting longitudinal side surfaces, thereby joining the lap portions together and forming the lap portions to a thickness of one belt-shaped glass sheet.

2. (Original) A method for joining belt-shaped glass sheets according to claim 1, wherein the thermally softened end portions are clamped at least once for a clamping time of about 2 seconds or less.

3. (Previously Presented) A method for joining belt-shaped glass sheets according to claim 1, wherein the end portions are superposed on each other so that the belt-shaped glass sheets form corner portions, the belt-shaped glass sheets are then held substantially within a vertical plane with the inside of the corner portions vertically upward, and the end portions are then thermally softened and pressed.

4. (Original) A joining method for belt-shaped glass sheets according to claim 3, wherein the end portions of the belt-shaped glass sheets are superposed on each other with end corners of the belt-shaped glass sheets partially notched.

5. (Currently Amended) A joining apparatus which joins end portions of belt-shaped glass sheets, comprising:

a glass sheet holding portion which holds a plurality of belt-shaped glass sheets so that only the end portions thereof overlap each other with longitudinal side surfaces of the end portions overlaid on one another in the thickness direction of each glass sheet;

a heating mechanism which thermally softens the end portions of the held belt-shaped glass sheets; and

a clamping mechanism configured to press lap portions of the thermally softened end portions from both sides in a thickness direction of the belt-shaped glass sheets, thereby joining the lap portions together and forming the lap portions to the thickness of one belt-shaped glass sheet.

6. (Previously Presented) A joining apparatus according to claim 5, wherein the clamping mechanism includes a pair of pressure dies movable between a clamping position, in which the dies face each other across a gap substantially equal to the thickness of the belt-shaped glass sheet, and an open position, in which the dies are spaced, and a drive mechanism which moves the pair of pressure dies from the open position to the clamping position with the lap portions of the belt-shaped glass sheets situated between the pair of pressure dies so that the lap portions are clamped and pressed by means of the pressure dies.

7. (Original) A joining apparatus according to claim 6, wherein the glass sheet holding portion includes a rack, which holds the belt-shaped glass sheets substantially flush

with one another in a manner such that the belt-shaped glass sheets extend across one another and that the end portions are superposed on each other so that the belt-shaped glass sheets form corner portions, and a base which supports the rack so that the belt-shaped glass sheets are situated substantially within a vertical plane with the inside of the corner portions vertically upward and that the lap portions are situated between the pair of pressure dies.

8. (Currently Amended) A method of manufacturing a glass frame, comprising:

holding a plurality of belt-shaped glass sheets substantially flush with one another in the form of a frame and locating end portions, which each have longitudinal side surfaces and a terminal end surface, of each two adjacent belt-shaped glass sheets so that the end portions overlap each other with longitudinal side surfaces of the end portions overlaid on abutting one another in the thickness direction of each glass sheet;

thermally softening the end portions of the belt-shaped glass sheets; and

pressing lap portions of the thermally softened end portions at least once from both sides towards the overlaid abutting longitudinal side surfaces, thereby joining the lap portions together and forming the lap portions to a thickness of one belt-shaped glass sheet.

9. (Original) A method manufacturing for a glass frame according to claim 8, wherein the thermally softened end portions are clamped at least once for a clamping time of about 2 seconds or less.

10. (Previously Presented) A method for manufacturing a glass frame according to claim 8, wherein the belt-shaped glass sheets are held substantially within a vertical plane in a manner such that the inside of corner portions defined by the end portions of the belt-shaped glass sheets faces vertically upward, and the end portions are thermally softened and pressed.

11. (Currently Amended) A manufacturing apparatus which manufactures a glass frame by joining end portions of belt-shaped glass sheets, comprising:

a glass sheet holding portion which holds a plurality of belt-shaped glass sheets so that ~~only~~ the end portions thereof overlap each other with longitudinal side surfaces of the end portions overlaid on one another in the thickness direction of each glass sheet, the belt-shaped glass sheets being arranged substantially flush with one another in the form of a frame;

a heating mechanism which thermally softens the end portions of the held belt-shaped glass sheets; and

a clamping mechanism which presses lap portions of the thermally softened end portions from both sides in a thickness direction of the belt-shaped glass sheets, thereby joining the lap portions together and forming the lap portions to the thickness of one belt-shaped glass sheet.

12. (Previously Presented) A manufacturing apparatus according to claim 11, wherein the clamping mechanism includes a pair of pressure dies movable between a clamping position, in which the dies face each other across a gap substantially equal to the thickness of the belt-shaped glass sheets, and an open position, in which the dies are spaced, and a drive mechanism which moves the pair of pressure dies from the open position to the clamping position with the lap portions of the belt-shaped glass sheets situated between the pair of pressure dies so that the lap portions are clamped and pressed by means of the pressure dies.

13. (Previously Presented) A manufacturing apparatus according to claim 11, further comprising a base which supports the glass sheet holding portion so that the belt-shaped glass sheets are situated substantially within a vertical plane, the base is rockable around a substantially horizontal axis of rotation, and can move the end portions of the belt-shaped glass sheets to a given joining position, and a sliding mechanism which supports the glass sheet holding portion for movement in the longitudinal direction of one of the belt-shaped glass sheets with respect to the base.

14. (Currently Amended) A method for manufacturing a side wall used for an image display apparatus, which comprises an envelope, having a front substrate and a rear substrate opposed to each other and a sidewall in the form of a rectangular glass frame located between the respective peripheral portions of the front substrate and the rear substrate, and a plurality of elements arranged in the envelope, comprising:

holding a plurality of belt-shaped glass sheets substantially flush with one another in the form of a frame and locating end portions, which each have longitudinal side surfaces and a terminal end surface, of each two adjacent belt-shaped glass sheets so that the end portions overlap each other with longitudinal side surfaces of the end portions overlaid on ~~abutting~~ one another in the thickness direction of each glass sheet;

thermally softening the overlapping end portions of the belt-shaped glass sheets; and pressing lap portions of the thermally softened end portions at least once from both sides towards the overlaid ~~abutting~~ longitudinal side surfaces, thereby joining the lap portions together and forming the lap portions to a thickness of one belt-shaped glass sheet.

15. (Currently Amended) An apparatus for manufacturing a side wall used for an image display apparatus, which comprises an envelope, having a front substrate and a rear substrate opposed to each other and a sidewall in the form of a rectangular glass frame

located between the respective peripheral portions of the front substrate and the rear substrate, and a plurality of elements arranged in the envelope, the apparatus comprising:

a glass sheet holding portion which holds a plurality of belt-shaped glass sheets so that only end portions thereof overlap each other with longitudinal side surfaces of the end portions overlaid on one another in the thickness direction of each glass sheet, the belt-shaped glass sheets being arranged substantially flush with one another in the form of a frame and constituting the glass frame;

a heating mechanism which thermally softens the end portions of the held belt-shaped glass sheets; and

a clamping mechanism which presses lap portions of the thermally softened end portions from both sides in a thickness direction of the belt-shaped glass sheets, thereby joining the lap portions together and forming the lap portions to the thickness of one belt-shaped glass sheet.